

WHAT IS CLAIMED IS:

1. A data structure encoded on a computer readable medium, comprising:
first data indicating an identity of a subscriber of a tracking service;
second data indicating one or more subscriber selected and defined alarm conditions,
said alarm conditions indicating conditions under which one or more alarm events associated
5 with a device occur, the one or more alarm events corresponding to at least one of an
environment, movement, and operation of the device; and
third data indicating one or more methods of contacting said subscriber in the event
said one or more alarm events occur.

5.6 A. 2. The data structure of claim 1, further comprising:
fourth data indicating a permissible geographic area associated with said device.

5 3. The data structure of claim 2, wherein said third data further indicates one or more
methods of contacting said subscriber in the event said device roams outside of said
permissible geographic area.

6 4. The data structure of claim 3, further comprising:
fifth data associated with said one or more methods of contacting said subscriber,
said fifth data indicating an order of selecting said one or more methods when contacting said
subscriber.

5. A system for notifying a subscriber of an event notification service of an occurrence of one or more alarm events, comprising:

means for receiving subscriber identity data identifying a subscriber of said service;

means for receiving one or more subscriber selected and defined alarm conditions;

5 means for receiving data associated with at least one of an environment, movement, and operation of a first communication device;

means for comparing said data with said alarm conditions to determine an occurrence of one or more alarm events; and

10 means for communicating an alarm event notification to the subscriber at a second communication device based on said comparison.

6. A method of notifying a subscriber of an event notification service of an occurrence of one or more alarm events, comprising:

receiving subscriber identity data identifying a subscriber of said service;

receiving one or more subscriber selected and defined alarm conditions;

5 receiving data associated with at least one of an environment, movement, and operation of a first communication device;

comparing said data with said alarm conditions to determine an occurrence of one or more alarm events; and

10 communicating an alarm event notification to the subscriber at a second communication device based on said comparison.

Sub A3} 7. The method of claim 6, wherein said data comprises at least one of acceleration, oxygen level, temperature, pulse rate, and blood oxygen level data.

8. The method of claim 6, further comprising:
receiving sensor data from sensors associated with said first communication device.

11 9. The method of claim 10, further comprising:
comparing said sensor data with said alarm conditions to determine an occurrence of one or more alarm events; and

communicating an alarm event notification to the subscriber at said second

5 communication device based on said comparison.

Sub A4} 10. The method of claim 6, wherein said one or more subscriber defined alarm conditions includes one or more geographic boundaries associated with a location of said first communication device.

12 11. The method of claim 10, wherein said one or more subscriber defined alarm conditions includes time period data corresponding to each of said one or more geographic boundaries.

Sub A5} 12. A tracking server, comprising:
a memory configured to store instructions; and
a processor configured to:

receive subscriber identity data identifying a subscriber of said service;

5 receive one or more subscriber selected and defined alarm conditions;

receive data associated with at least one of an environment, movement and
operation of a first communication device;

compare said data with said alarm conditions to determine an occurrence of
one or more alarm events; and

10 communicate an alarm event notification to a second communication device
based on said comparison.

13. A computer-readable medium containing instructions for controlling at least one
processor to perform a method of notifying a subscriber of an event notification service of an
occurrence of one or more alarm events, comprising:

receiving subscriber identity data identifying a subscriber of said service;

5 receiving one or more subscriber selected and defined alarm conditions;

receiving data associated with at least one of an environment, movement and
operation of a first communication device;

comparing said data with said alarm conditions to determine an occurrence of one or
more alarm events; and

10 communicating an alarm event notification to the subscriber at a second
communication device based on said comparison.

14. A method of notifying a subscriber of an event notification service of an occurrence of
one or more alarm events, comprising:

receiving data associated with at least one of an environment, movement and
operation of a first communication device;

- 5 comparing said data with subscriber-selected and defined alarm conditions; and
communicating an alarm event notification to a second communication device based
on said comparison, wherein said second communication device is selected from a plurality
of subscriber-designated communication devices.

56 A6> 15. The method of claim 14, wherein said data is associated with at least one of an
acceleration, an oxygen level, a temperature, a pulse rate, and a blood oxygen level.

16. The method of claim 14, further comprising:
receiving sensor data from sensors associated with said first communication device.

- 18 17. The method of claim 16, further comprising:
comparing said sensor data with said subscriber-selected alarm conditions; and
communicating an alarm event notification to a second communication device based
on said comparison, wherein said second communication device is selected from a plurality
5 of subscriber-designated communication devices.

56 A7> 18. The method of claim 14, wherein said subscriber-selected alarm conditions include
one or more geographic boundaries associated with a location of said first communication
device.

19. The method of claim ¹⁵18, wherein said subscriber-selected alarm conditions includes time period data corresponding to each of said one or more geographic boundaries.

Sub A8 > 20. A computer-readable medium containing instructions for controlling at least one processor to perform a method of notifying a subscriber of an event notification service of an occurrence of one or more alarm events, comprising:

receiving data associated with at least one of an environment, movement and

5 operation of a first communication device;

comparing said data with subscriber-selected and defined alarm conditions; and

communicating an alarm event notification to a second communication device based on said comparison, wherein said second communication device is selected from a plurality of subscriber-designated communication devices.

21. A first communication device, comprising:

a memory configured to store executable instructions; and

at least one processor configured to:

receive data associated with at least one of an environment, movement and

5 operation of a second communication device;

compare said data with subscriber-selected and defined alarm conditions; and

communicate an alarm event notification to a third communication device

based on said comparison, wherein said third communication device is selected from a plurality of subscriber-designated communication devices.

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22. A method of tracking a communication device, comprising:

receiving a set of subscriber-defined alarm conditions associated with said communication device;

receiving location and sensor data associated with the communication device;

5 comparing said location and sensor data with each alarm condition of said set of subscriber-defined alarm conditions; and

indicating an occurrence of one or more alarm events based on said comparison.

23. A computer-readable medium containing instructions for controlling at least one processor to perform a method of tracking a communication device, comprising:

receiving a set of subscriber-defined alarm conditions associated with said communication device;

5 receiving location and sensor data associated with the communication device;

comparing said location and sensor data with each alarm condition of said set of subscriber-defined alarm conditions; and

indicating an occurrence of one or more alarm events based on said comparison.

24. A first communication device, comprising:

a memory configured to store executable instructions; and

at least one processor configured to:

receive a set of subscriber-defined alarm conditions associated with a second

5 communication device;

receive location and sensor data associated with the second communication

device;

compare said location and sensor data with each alarm condition of said set of subscriber-defined alarm conditions; and

10 indicate an occurrence of one or more alarm events based on said comparison.

25. A graphical user interface for subscribing to a tracking and notification service, the graphical user interface manipulating data entry groups that perform actions on a database, comprising:

5 a first activation area on the graphical user interface for activating creation of a first data entry group, a first graphical area associated with said first data entry group requesting identifier information of a subscriber of said tracking and notification service, said first data entry group accepting user entry of said subscriber identifier information upon activation; and

10 a second activation area on the graphical display activating creation of a second data entry group, a second graphical area associated with said second data entry group displaying a plurality of alarm conditions associated with a device, said second data entry group accepting user selection of one or more of said plurality of alarm conditions upon activation.

Sub A9) 26. The graphical user interface of claim 25, further comprising:

a third activation area on the graphical display for activating creation of a third data entry group, a third graphical area associated with said third data entry group requesting parameters for each user selected alarm condition, said parameters specifying limits on said

5 alarm conditions, said third data entry group accepting user entry of said parameters upon activation.

27. The graphical user interface of claim 25, further comprising:

a third activation area on the graphical display for activating creation of a third data entry group, a third graphical area associated with said third data entry group requesting data indicating one or more permissible geographic areas, said permissible geographic areas
5 specifying boundaries on a location of said device, said third data entry group accepting user entry of said one or more permissible geographic areas upon activation.

28. The graphical user interface of claim 25, further comprising:

a third activation area on the graphical display for activating creation of a third data entry group, a third graphical area associated with said third data entry group requesting data indicating one or more methods of contacting said subscriber, said third data entry group
5 accepting user entry of said one or more contact methods upon activation.

29. A method for subscribing to a tracking and notification service, comprising:

communicating a request for subscriber information from a first communication device, said request including a set of alarm conditions for selection by a subscriber; and

transmitting subscriber information from a second communication device in response
5 to said request, said subscriber information including one or more subscriber-selected alarm conditions associated with a third communication device.

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30. A system for subscribing to a tracking and notification service, comprising:
a first communication device;
a second communication device; and
a third communication device, wherein said third communication device receives a

5 request for subscriber information from said first communication device, the request
including a set of subscriber-selectable alarm conditions, and transmits the subscriber
information in response to said request, said subscriber information including one or more
subscriber-selected alarm conditions associated with said second communication device.

31. A method of notifying a subscriber of an event notification service of an occurrence of
one or more alarm events, comprising

receiving a customized set of alarm conditions from a subscriber of said service;
sensing parameters associated with at least one of an environment, movement and

5 operation of a communication device;

comparing said customized set of alarm conditions with said sensed parameters; and
notifying said subscriber of an occurrence of one or more alarm events based on said

comparison.

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